DOCUMENT RESUME

ED 290 973 CG 020 505

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TITLE Diagnostic and Prescriptive Interviews with Undecided Freshmen in Academic Jeopardy. Research Report #9-87.
INSTITUTION Maryland Univ., College Park. Counseling Center.
PUB DATE 87
NOTE 19p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Advising; *Academic Failure; *College Freshmen; *College Programs; *Educational Diagnosis; Grade Point Average; Higher Education; Interviews; Majors (Students); *Student Improvement

ABSTRACT

In the spring semester of 1984, 45 full-time second semester freshmen at the University of Maryland, College Park whose first semester grade point averages were less than 2.0 and who had not yet declared a major participated in a modified replication of a diagnostic and prescriptive interview program. By means of one (N=25) or two (N=20) interviews with Academic Advisement Center staff, this program aimed to help students first to identify the causes of their poor grades and then to determine which campus resources could be useful to them in preventing low achievement from recurring. Although the findings for the single-interview format were minimal when compared to a nontreatment control group, the effect size patterns of the two-interview format for the outcome variable, persistence in good standing, were moderate. Considering the modest nature of the treatment, the results, while not reaching statistical significance, were encouraging, as the practical importance of retention interventions with respect to the academic well-being of motivated students and to the effectiveness of the university cannot be overestimated. (Author)

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Research Report # 9 - 87

The Counseling Center Retention Study Group*

*Vivian Bland, Vivian Boyd, Steven Carstens, Patricia Hunt, Stanley Hunt, Mary Leonard, Thomas Magoon, Jean McDevitt.

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Summary

In Spring semester 1984 45 fulltime second semester freshmen whose first semester grade point averages were less than 2.0 and who had not yet delared a major participated in a modified replication of a diagnostic and prescriptive interview program. By means of one (n=25) or two (n=20) interviews with Academic Advisement Center staff, this program aimed to help students first to identify the causes of their poor grades and then to determine which campus resources could be useful to them in preventing low achievement from recurring. Although the findings for the single interview format were minimal when compared to a nontreatment control group, the effect size patterns of the two interview format for the outcome variable, persistence in good standing, were moderate. Considering the modest nature of the treatment, the results, albeit lacking in statistical significance, were encouraging, as the practical importance of retention interventions with respect to the academic wellbeing of motivated students and to the effectiveness of the university can not be overestimated.

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Diagnostic and Prescriptive Interviews with Undecided Freshmen in Academic Jeopardy

The Counseling Center Retention Study Group*
The University of Maryland College Park

Once a college or university admits a student into a degree program, responsibility generally falls both on the institution to provide support services that will enable the student to achieve his/her educational goals, and on the student to take advantage of the resources the institution has to offer. For students with a low GPA, use of campus facilities has been correlated with persistence (Churchill & Iwai, 1981). Unfortunately, many students in academic jeopardy fail to avail themselves of the resources provided to them by their institution (Romano & Young, 1981). Therefore, colleges and universities in increasing numbers and in the interest of retention have taken a proactive stance, wherein they take the initiative and contact academically at-risk students to offer them specific services (Glennon, 1976; Himelstein & Himelstein, 1977; Hudesman, Avramides, Loveday, Weber, & Wendell, 1983; Landward & Hepworth, 1984; Letchworth & Bleidt, 1983; Romano & Young, 1981; Tata, 1981; Tricomi, Donaruma, Dugan, & Cuevas, 1982).

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Glennon (1976) found that when freshmen and new transfer students receiving low midterm grades were required to see their counselor, 74% of the students who saw their counselor earned passing grades. Furthermore, this "intrusive counseling program" reduced freshman attrition from 45% to 6% during the first two years of operation. The stunning results of Glennon's study have not been duplicated in similar studies. Indeed, what seems more typical is a short-lived effect, in which GPA increases during the semester of intervention and reenrollment rates remain stable the semester after intervention for experimentals as compared to controls. These minimal improvements appear to be transient, and rates return to institutional baselines within a year after the intervention (Dukes & Gaither, 1984; Landward & Hepworth, 1984).

There is some indication that students in academic jeopardy respond to structure and clearly defined expectations (Hudesman et al., 1983; Tricomi et al.,1982; Warman, 1983). Warman found that Iowa State University freshmen whose first term GPA was lower than the minimum needed for graduation responded well to a single interview conducted early in the semester in order to identify the cause(s) of the low grades and to inform the student of appropriate campus resources. As compared with controls, the experimental students had a higher second semester GPA and were more likely to return for their sophomore year.

The total amount of time commitment expected of the participating student is an important variable to consider when planning a proactive intervention. Although GPA improvement has been shown to be related to degree of student commitment to the

requirements of the intervention, commitment tends to decrease as the length of time required by the intervention increases (Himelstein & Himelstein, 1977; Romano & Young, 1981).

The Retention Study Group (RSG) (1986) replicated the Warman study with some modifications. RSG studied second semester University of Maryland freshmen whose first semester GPAs were less than 2.00, the minimum required to graduate. They found that in subsequent semesters students who participated in the program persisted at somewhat higher rates and did better academically than a comparison group of students who had not participated in the program.

The present study is a replication of the 1986 RSG study, with two modifications: (1) the target population was fulltime freshmen whose first semester grade point averages were less than 2.00 and who had not yet declared a major; (2) the diagnostic and prescriptive interviews were carried out by staff at the Academic Advisement Center.

METHOD

Student Participants

The target population consisted of all fulltime freshmen who had matriculated at The University of Maryland College Park in the fall of 1983; whose major was listed as Undergraduate Studies; and whose fall 1983 GPA was less than 2.00. Any students who were involved in other Counseling Center retention interventions and/or who had no local address and/or phone number were excluded from the present study. From the remaining 144 students, every third name (n = 48) was selected and assigned to

the nontreatment control group. The remaining 96 students were each sent a letter from the Undergraduate Dean. The letter expressed concern at the student's academic performance, and recommended consultation with an advisor or faculty member. The letter also alerted the students of the possibility that an Academic Advisement Center staff person would telephone them to arrange an interview. The purpose of this interview was to determine why their grades were low and how to improve their academic performance in the future. Of the 96 students, 43 were on academic probation as a result of their first semester grades, and were sent a variation of the Dean's letter which included a statement that they were on academic probation. Students in the nontreatment control group who were on probation (n = 17) were sent the Academic Advisement Center's standard warning letter.

The names of the 96 experimentals were divided among the six academic advisors participating in the study. Each advisor randomly selected two-thirds of the students in their treatment group for the diagnostic and prescriptive interview and a followup interview. The other third were given only the single interview. This difference in treatment was designed to provide an indication of the degree of interview contact needed to produce an effect on persistence and academic performance.

The Interviews

After a brief introduction about the purpose of the diagnostic and prescriptive interview, students completed a Problem Checklist developed by Warman (1983). The questionnaire asked students to indicate which of 22 common causes of low

grades applied to him/her and to circle those which were major causes. During discussion of the student's particular issues, the advisor referred the student to appropriate campus resources, using a campus Resource Manual prepared by the Retention Study Group for the study and indexed to the problems listed on the Problem Checklist.

The purpose of the followup interview was to ascertain what progress had occurred on the recommendations made during the initial interview and how the semester was going for the students. Additional resources were suggested where appropriate.

Outcome Variables

Retention intervention evaluations which use the criterion variables of subsequent enrollment and subsequent academic performance, can take different forms, reflecting the particular point in time at which the criterion data are gathered. Two notable points in time are (a) end of semester, and (b) beginning of a subsequent semester. The end of semester index has the initial advantage of providing retention and performance data sooner both for program evaluation purposes and for designing possible additional intervention "boosters." Furthermore, being closer in time to the intervention, it reduces the chance of confounding intervening variables. A disadvantage of this index is that there may have been insufficient elapsed time for treatment effects to manifest themselves.

The beginning of the (following) semester index, particularly for interventions which take place during the spring semester, has the initial advantage of distinguishing attrition which occurs over the summer period (one of the highest attrition

periods) from that which occurs during the following fall semester. An implication here is that students who complete a semester in good standing yet do not reenroll for the following semester may have benefitted from the intervention and consequently may have more options within the higher education system than students who drop out during a semester.

Regardless of which index is used, the criterion variables must be clearly defined and the criterion data gathered in a way consistent with the definitions. The present study used the end of semester point in time for gathering its criterion data. Two outcome variables were employed to determine the impact of the intervention on student retention rates:

1. Academic persistence, defined as having completed a given semester.

2. Academic persistence in good standing, defined as having completed a given semester, and with no academic action taken as a result of that semester.

In addition, semester grade point averages were examined to provide some indication of academic performance. All data concerning registration status, academic action, and GPA were obtained from University records.

RESULTS

The initial and the followup interviews were completed by 20 students. Fourteen students were scheduled for and completed the single interview. Eleven more were scheduled for the followup interview but failed to show for it. These 11 were combined with

the single interview group for the purpose of the analysis.

Table 1 shows academic persistence by group. For the semester following the semester of intervention, persistence rates were 80% for the two interview group, 76% for the single interview group, and 71% for the control group. The differences are not statistically significant at the .05 level, using the chi square statistic, but they are in the anticipated direction. Effect sizes calculated using Glass and Smith's (1980) probit analysis procedure reveal minimal, zero, and even negative effect sizes for most comparisons. In other words, the two interview condition showed slightly better (but nonsignificant) retention rates than the control condition. Where there were any effects, they were small.

Table 1.

Percent of Academic Persistence Among Groups

	Groups							
	Two Interviews			One Interview			Controls	
Semester	n	%	ES(b)	n	%	ES	n	%
initial n	20			25			48	
Spring '84(a)	19	95	.09	23	92	.00	44	92
Fall '84	16	80	.29	19	76	.20	34	71
Spring '85	13	65	.08	17	68	.17	30	63
Fall '85	13	65	.29	14	56	.00	27	56
Spring '86	13	65	.23	13	52	-.06	26	54

(a) Semester of intervention
(b) Effect size, as calculated between each experimental group and the control group by probit analysis - Glass & Smith, 1980

Table 2 shows the percent of students who persisted in good standing, by group. For the Fall 1984 semester - the first semester following treatment - the percent was 50% for the two-interview group; 44% for the single interview group; and 35% for the nontreatment control group. Although the differences are again in the anticipated direction, the chi square statistic showed they are not statistically significant at the .05 level. Effect size calculations reveal that three of the six two-interview outcomes showed what Cohen (1977) considered to be moderate effect sizes (delta > .50). These effects were consistently in the moderate range for the two-interview intervention, but were consistently small for the one-interview condition. Thus, when compared to nontreatment controls, two interview subjects showed beneficial (nonsignificant) trends in persistence in good standing.

Table 2.

Percent of Academic Persistence "in Good Standing" Among Groups

	Groups							
	Two Interviews			One Interview			Controls	
Semester	n	%	ES(b)	n	%	ES	n	%
initial n	20			25			48	
Spring '84(a)	14	70	.47	12	48	-.13	25	52
Fall '84	10	50	.39	11	44	.24	17	35
Spring '85	9	45	.12	13	52	.30	19	40
Fall '85	12	60	.50	13	52	.30	19	40
Spring '86	13	65	.59	12	48	.15	20	42

(a) Semester of intervention
(b) Effect size, as calculated between experimental groups and the control group by probit analysis - Glass & Smith, 1980

Semester grade point averages were examined to provide some indication of academic performance. Table 3 shows semester grade point averages for each group. For the semester of intervention (Spring 1984) the GPA for the two interview group was 2.2; the single interview group, 1.8; the control group, 1.9. At the end of the first semester after intervention, the GPA for the control group essentially matched that of the two interview group (2.0), with the single interview group mean lagging below the minimum required for graduation, at 1.9. By the fourth semester after intervention, the GPAs of all three groups were essentially the same (2.40, 2.34, and 2.35 respectively). Effect size comparisons for GPA revealed a scattered, usually weak effect size with little consistency in the outcomes.

Table 3.

Semester Grade Point Average by Group

	Group										
	Two Interviews				One Interview				Controls		
Semester	M	S.D.	n	ES(b)	M	S.D.	n	ES	M	S.D.	n
initial n			20				25				48
S '84(a)	2.2	.72	19	.43	1.8	.94	23	-.11	1.9	.84	44
F '84	2.0	.65	16	.01	1.9	.90	19	-.19	2.0	.70	34
S '85	2.2	.65	13	.02	2.3	.90	17	.09	2.2	.57	30
F '85	2.4	.67	13	.36	2.3	.56	14	.29	2.1	.86	27
S '86	2.4	.55	13	.06	2.3	.72	13	-.01	2.4	.84	26

(a) Semester of intervention
(b) Effect size between the treatment groups and the control group, using Cohen's (1977) d calculated as Xe-Xc/SDc.

DISCUSSION

Freshmen in academic jeopardy are a troubled and institutionally unsettling group. Thus, we were not surprised when the diagnostic and prescriptive interview, a modest intervention, had a nonsignificant effect - statistically if not institutionally - on persistence and on academic performance. There was some room for optimism however. Although the findings for the single interview format were minimal, and in some cases negative, the effect size patterns for the two-interview format for the outcome variable of persistence in good standing were in the range of what Cohen (1977) described as moderate.

The practical significance of these effects is considerable. If one projects these findings to a larger group, of 1000 freshman students for example, some 700 of those students receiving the two interview condition would still remain in good standing at the University of Maryland two years later, compared to only 400 of the students who received the single interview condition. Considering the modest nature of the treatment, this finding is quite remarkable.

Limitations

A major disadvantage to small sample research investigating the impact of a particular intervention on subsequent retention and academic performance is that with small numbers it is very difficult to show statistical significance, and hence to know how to interpret the results. One could look at the lack of statistical significance in the present study and conclude there was no treatment effect. Or one could conclude that given the trends over time evident in the results, there is cause for

further research and revised application of the intervention.

The diagnostic and prescriptive interview was not mandatory. Students in academic jeopardy were contacted first by letter and then by phone to schedule interviews with students who were interested in participating in a program designed to help them discover ways of improving their academic performance and their chances of persisting until graduation. Because attendance at the diagnostic and prescriptive interviews was not compulsory there was a self-selecting process in effect, whereby students motivated to participate in the program comprised the treatment group. This self-selection process limits the generalizability of the study's results.

As a modified replication, the present study's findings do not replicate the statistical significance found by Warman (1983), in which significantly more students in the treatment group than in the control group returned for the following fall semester; and the treatment group did significantly better than the control group on grades earned during the semester of intervention (spring). Findings from retention studies have been notoriously inconsistent in their outcomes. There are many explanations for this inconsistency, not the least of which is sampling error and sample size (low power). The inclusion of institutional baseline data for the institution in question may yield more reliable results.

Implications

The findings of the present study, along with those of the Warman (1983) and RSG (1986) studies indicate that students in

academic jeopardy who accept the offer early in their second semester to meet with a university professional staff person to diagnose the reasons for their poor academic performance and to learn of campus resources available to help with their particular problems or issues, tend to do better academically and reenroll in greater numbers than do students not offered that opportunity. The timing of the contact is important, in that students in academic jeopardy are told of campus resources at a time when they are most receptive to that information. Similar information offered at orientation or prior to the feedback of first semester grades perhaps has less impact.

The fact that in the present study and in the Retention Study Group (1986) study the two interview group did better academically and reenrolled in greater numbers than did the single interview group suggests the importance of having at least one followup interview contact. The purpose of the second interview is to reinforce the effect of the initial interview and to determine the utility of the resources prescribed. Further research is needed to determine the effect of additional contacts with the treatment group, perhaps over the summer months when attrition tends to be highest.

The diagnostic and prescriptive interview can be done feasibly by a variety of professional staff more or less familiar with the university's support resources. Faculty could well be more effective as interviewers than academic advisors. Certainly a proactive contact from a faculty member would be a clear expression of concern on the part of the institution. The use of the Resource Manual facilitates the ability of the

diagnostic and prescriptive interviewer to make referrals without the necessity of firsthand knowledge of the numerous programs and resources that have evolved to support the needs of a diverse undergraduate population at a large university campus.

We are disappointed with our failure to produce statistical significance, but cheered by the strength in the two inteview format, and hope that future studies - which, if one is serious about retention, one must continue to conduct - will be more positive. Designing potent retention inteventions for at-risk populations is a challenge for the entire university community. The practical importance of retention interventions with respect to the well-being of motivated students and to the reputation and effectiveness of the university can not be overestimated.

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